

Preliminary studies on glaucoma patients indicate that the intraocular pressure effect of pilocarpine is greatly enhanced when used with a hydrophilic lens. However, no conventional eye drops can be used with the present soft lens because the concentration of the preservative in the lens destroys the corneal epithelium.

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Blow-out Fractures of the Orbital Floor

FRACTURES OF THE ORBIT AND ORBITAL FLOOR are commonplace, and since 15 to 20 percent of the orbital fractures are associated with serious ocular injuries, ophthalmological consultation is indicated.

Surgical repair of fractures of the floor of the orbit are performed to correct diplopia and to prevent enophthalmos. However, it is felt that this operation should be postponed until the orbital edema and hemorrhages have had time to subside, usually within two weeks. Many of the cases of diplopia do clear up spontaneously and no difference in the prognosis has been demonstrated when operation is delayed that long.

Several cases of visual loss have occurred following orbital floor repair due either to direct trauma to the optic nerve or its blood supply at the time of operation or from compression by a resulting orbital hemorrhage. Operation by a well-trained team that includes an ophthalmologist, and careful daily postoperative examinations, including confrontation fields and ophthalmoscopic study in addition to bedside determination of visual acuity, should keep these serious complications to a minimum.

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Management of Congenital Cataracts

EARLY OPERATION FOR bilateral congenital cataracts, whether they are due to rubella, heredity or metabolic disease, is indicated according to most authorities. With the use of contact lenses fitted in the operating room, it is feasible to do a unilateral cataract operation with hope of obtaining some useful vision, although the results so far are not always encouraging.

The reintroduction of the aspiration type of lens extraction in cataracts of infancy and childhood by Scheie, is the generally accepted method today. His principle of using a large-gauge needle is the basis of the operation although there have been many modifications by various surgeons. Long term post-operative use of mydriatics and cycloplegics seems to be imperative.

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Microsurgery in Open Angle Glaucoma

THE MAIN TREATMENT OF OPEN angle glaucoma is medical, and with the stronger miotics and the carbonic anhydrase inhibitors it was hoped that operation would not be indicated. However, some of the medications were not tolerated or became ineffective, so it is necessary to operate in a number of these cases. The classical anti-glaucomatous filtration operations have many complications, the main one being the progression of cataracts.

With the advent of microsurgical techniques, three new methods have been devised:

1. Trabeculotomy, in which a slit is made to open the corneoscleral meshwork and establish a direct communication between Schlemm's canal and anterior chamber.

2. Trabeculectomy, which consists of removing a piece of the corneoscleral meshwork and the underlying Schlemm's canal so there are two openings of the canal in direct communication with the anterior chamber. This procedure has been simplified in Dellaporta's trepanotrabeculectomy.

3. Sinusotomy, or externalization of Schlemm's canal: A strip of sclera overlying Schlemm's canal is removed and a direct communication from the canal to the subconjunctival tissues is created.

The above methods appear to work as well as the classical filtration operations, with fewer complications. However, they can only be performed with the operating microscope.

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Strabismus Management

THE BASIC PRINCIPLES of the care of the child with muscle problems remain unchanged. The emphasis is on early detection of strabismus and amblyopia in these children.

Reluctance by the child to have his good eye covered and jerky following movements noted in the poorer eye when the good eye is covered are signs which should alert the pediatrician or the family physician to the possibility of amblyopia. Full-time occlusion of the better eye is still the method of choice to correct amblyopia after determining that there is no other eye disease.

Early operation to correct strabismus is advocated by most ophthalmic physicians, especially in non-accomodative strabismus, which is usually noted shortly after birth. In these cases, glasses do not usually help the deviation and operation is performed between 6 and 18 months of age. Foveal fusion is rarely obtained in congenital esotropia, but peripheral fusion frequently develops following early surgery. In accommodative esotropia with a later onset, glasses, occlusion and orthoptics are used.

The surgical incision of the conjunctiva is now often made near the limbus rather than over the muscle directly. Better functional and cosmetic results have been reported with this incision. Collagen and other new materials are being tried to reduce postoperative suture reactions. The use of thin paste-on Fresnel prisms is now being evaluated to improve fusion where a small postoperative deviation exists.

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Diabetic Retinopathy

DIABETIC RETINOPATHY REMAINS a leading cause of blindness in the United States. Approximately 15 percent of the three million diabetics in this country have visual impairment, and it is expected that by the year 2000 there will be 500,000 persons blind because of diabetes.

The more common nonproliferative form, which is characterized by microaneurysms, retinal hemorrhages and exudates, venous abnormalities, and intraretinal shunt vessels, can cause visual loss by macular involvement with edema or exudates or both. The proliferative form of the disease, characterized by new vessel growth on and extending beyond the retinal surface, accompanied by fibrous and glial proliferation, occurs in approximately 6 percent of those with retinopathy and is by far the more destructive form of the disease. Neovascularization and its associated retinal and vitreous hemorrhage, fibrous proliferation, retinal traction, and retinal detachment may lead to blindness in a matter of months in spite of all medical efforts.

Current therapy must include careful regulation of the diabetes from the onset of the disease. Photocoagulation, by ruby and argon laser and xenon arc, permits thermal destruction of vascular abnormalities and may aid in the absorption of intraretinal edema and exudates.

Pituitary ablation is still in use for treatment of severe diabetic retinopathy, but these patients